

## REMARKS

The applicants appreciate the Examiner's thorough examination of the Application and request reexamination and reconsideration of the Application in view of the following remarks.

The Examiner has objected to claims 2 and 6 alleging that they are duplicative and do not differ in scope. Claims 2 and 6, however, do differ in scope in that in claim 2 the end point coefficients include the offset coefficient and the gain coefficient, whereas in claim 6 the end point coefficients include the zero-scale and full-scale coefficients. Applicants respectfully request that the Examiner withdraw this objection.

Claims 1-3, 6, 17, 41-44 and 55 stand rejected under 35 USC §102(e) as allegedly being anticipated by U.S. Patent No. 6,667,703 B1 to Reuveni et al. Claims 12, 24, 50 and 60 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Reuveni et al. Claims 7, 31, 36, 45, 65 and 70 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Reuveni in view of U.S. Patent No. 6,130,632 to Opris and in further view of the Analog Devices Analog-Digital Conversion Handbook. Claims 8-11, 13-16, 20-23, 27-30, 32-35, 37-40, 46-49, 51-54, 56-59 and 61-64 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Reuveni et al. in view of U.S. Patent No. 6,191,715 B1 to Fowers. Claims 66-69 and 71-74 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Reuveni et al. in view of Fowers, in further view of Opris and in further view of the Analog Devices Analog-Digital Conversion Handbook.

Applicants herein submit an Affidavit under 37 CFR §1.131 that includes Exhibits A and B to swear behind the filing date of Reuveni et al. As the Affidavit shows,

Applicants not only conceived the claimed invention prior to August 30, 2002, which is the filing date of Reuveni et al., Applicants also reduced to practice the claimed invention before this date.

Exhibit A attached to the Affidavit illustrates this conception of a simple and inexpensive, but much more accurate, DAC that can be achieved by integrating a calibration unit with the DAC to digitally provide the DAC transfer function end point coefficients, e.g. gain and offset coefficients, zero scale and full scale coefficients to the DAC, in which coefficients can be stored in a memory of the calibration circuit and can be applied to adjust the DAC end points.

Pursuant to this conception, the inventors actually reduced to practice in the United States, the invention claimed in the subject patent application prior to August 30, 2002, the filing date of the cited Reuveni et al. patent. Exhibit B attached to the Affidavit illustrates a DAC that is integrated with a calibration unit to digitally provide the DAC transfer function end point coefficients to the DAC, in which coefficients can be stored in a memory of the calibration circuit and can be applied to adjust the DAC end points.

Exhibits A and B, which relate to the aforementioned conception and actual reduction to practice, correspond to the invention broadly disclosed and claimed in the subject patent application.

Claim 1 of the subject application recites "[a]n integrated programmable digital calibration circuit and digital to analog converter comprising: a digital to analog converter (DAC); and a digital calibration circuit including a memory for storing predetermined end point coefficients of said digital to analog converter transfer function; and an arithmetic logic unit for applying the end point coefficients to the DAC input signal to adjust the


end points of said DAC." Exhibits A and B clearly disclose the invention of claim 1.

Independent claims 1, 12, 17, 24 and 31 recite similar features.

Since Reuveni et al. is recited in each of the above rejections, the Applicants have traversed each of the Examiner's rejections by submitting the attached Affidavit to swear behind Reuveni et al. Applicants assert that the subject invention as claimed is patentable over the prior art.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, or his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,

A handwritten signature in cursive script, reading "David W. Poirier", is written over a horizontal line.

David W. Poirier  
Reg. No. 43,007

Attachment

Affidavit under 37 CFR §1.131 (including Exhibits A and B)